

What is claimed is:

1 1. An e-mail transmission/reception system including a mail
2 terminal, a mail server, and a mail gateway, wherein the mail
3 gateway is connected to the mail terminal via a network and the
4 mail server via another network,

5 the mail server comprising:

6 an attached file holding unit operable to receive e-mail
7 addressed to a user who possesses the mail terminal and hold
8 one or more attached files included in the e-mail; and

9 a mail distribution unit operable to receive e-mail
10 transmitted from the mail gateway and distribute the e-mail to
11 one or more receivers' addresses thereof,

12 the mail gateway comprising:

13 an identifier generation unit operable to generate an
14 identifier for each attached file held by the attached file
15 holding unit;

16 a list transmission unit operable to generate a list of
17 identifiers generated by the identifier generation unit and
18 transmit the list to the mail terminal;

19 a reception unit operable to receive e-mail transmitted
20 from the mail terminal, the e-mail including one or more
21 identifiers that the user selects from the identifier list as
22 substitutes for one or more attached files that the user wants
23 to attach to the e-mail;

24 an attached file acquisition unit operable to acquire
25 attached files from the attached file holding unit, the attached
26 files corresponding to the identifiers included in the e-mail
27 received by the reception unit;

28 a construction unit operable to construct e-mail by
29 attaching the attached files acquired by the attached file
30 acquisition unit to the e-mail received by the reception unit;
31 and

32 a mail transmission unit operable to transmit the e-mail
33 constructed by the construction unit to the mail server,
34 the mail terminal comprising:

35 a list reception unit operable to receive the identifier
36 list from the mail gateway;

37 a preparation unit operable to prepare e-mail that
38 includes one or more identifiers selected by the user from the
39 identifier list as substitutes for one or more attached files
40 that the user wants to attach to the e-mail; and

41 a transmission unit operable to transmit the prepared
42 e-mail to the mail gateway.

1 2. The e-mail transmission/reception system of Claim 1,
2 wherein

3 the attached file holding unit, whenever receiving e-
4 mail that includes attached files, generates a list of the
5 attached files and passes the list to the identifier generation
6 unit, and

7 the identifier generation unit generates an identifier
8 for each of the attached files in accordance with the list passed
9 by the attached file holding unit.

1 3. The e-mail transmission/reception system of Claim 1,
2 wherein

the mail terminal further comprises:

a file format registration unit operable to register one or more files formats of attached files for each receiver's address that the receiver should adopt in the mail gateway, the mail gateway further comprises:

a file format storage unit operable to store receivers' addresses and file formats that are registered by the file format registration unit; and

a file format conversion unit operable to convert file formats of attached files for each receiver's address in accordance with the receivers' addresses and the file formats that are stored in the file format storage unit,

wherein the construction unit constructs e-mail by attaching the attached files converted by the file format conversion unit from and as a substitute for the attached files acquired by the attached file acquisition unit.

4. The e-mail transmission/reception system of Claim 1,
wherein

the mail terminal further comprises:

a sharing notification unit to notify the mail gateway that one or more attached files included in e-mail addressed to the user of the mail terminal are to be shared with other users,

the mail gateway further comprises:

an attached file sharing unit operable to, when receiving the notification that the attached files are to be shared with the other users from the mail terminal, share each of the

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12 attached files held by the attached file holding unit with the
13 other users;

14 a shared identifier generation unit operable to generate
15 a shared identifier for each of the attached files shared by
16 the attached file sharing unit, wherein the shared identifier
17 is available for sharers of the attached files,

18 wherein the sharing notification unit further includes:

19 a shared file notification unit operable to notify the
20 mail gateway of one or more identifiers selected by the user
21 from the identifier list as substitutes for the one or more
22 attached files that are permitted to be shared; and

23 a sharer notification unit operable to notify the mail
24 gateway of one or more sharers of each of the attached files
25 that are to be shared with the other users;

26 wherein the attached file sharing unit shares attached
27 files that correspond to the identifiers notified from the
28 shared file notification unit among attached files held by the
29 attached file holding unit with the sharers notified from the
30 sharer notification unit,

31 the list transmission unit further transmits a list of
32 the shared identifiers to the sharers of the attached files,
33 the attached file acquisition unit further acquires attached
34 files that correspond to the shared identifiers, and

35 the list reception unit further receives a list of shared
36 identifiers that have one to one correspondence to each of the
37 attached files that are shared by the user of the mail terminal
38 as one member of the sharers.

1 5. An e-mail transmission/reception system including a mail
2 terminal and a mail gateway, the mail gateway being connected
3 to the mail terminal via a network,

4 the mail gateway comprising:

5 an attached file holding unit operable to receive e-mail
6 addressed to a user who possesses the mail terminal and hold
7 one or more attached files included in the e-mail; and

8 an identifier generation unit operable to generate an
9 identifier for each attached file held by the attached file
10 holding unit;

11 a list transmission unit operable to generate a list of
12 identifiers generated by the identifier generation unit and
13 transmit the list to the mail terminal;

14 a reception unit operable to receive e-mail transmitted
15 from the mail terminal, the e-mail including one or more
16 identifiers selected by the user from the identifier list as
17 substitutes for one or more attached files that the user wants
18 to attach to the e-mail;

19 an attached file acquisition unit operable to acquire
20 attached files from the attached file holding unit, the attached
21 files corresponding to the identifiers included in the e-mail
22 received by the reception unit;

23 a construction unit operable to construct e-mail by
24 attaching the attached files acquired by the attached file
25 acquisition unit to the e-mail received by the reception unit;
26 and

27 a mail distribution unit operable to distribute the
28 e-mail constructed by the construction unit to receivers'

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29 addresses of the e-mail,
30 the mail terminal comprising:
31 a list reception unit operable to receive the identifier
32 list from the mail gateway;
33 a preparation unit operable to prepare e-mail that
34 includes one or more identifiers selected by the user from the
35 identifier list as substitutes for one or more attached files
36 that the user wants to attach to the e-mail; and
37 a transmission unit operable to transmit the e-mail
38 prepared by the preparation unit to the mail gateway.

1 6. The e-mail transmission/reception system of Claim 5,
2 wherein the attached file holding unit, whenever
3 receiving e-mail that includes attached files, generates a list
4 of the attached files and passes the list to the identifier
5 generation unit, and
6 the identifier generation unit generates an identifier
7 for each of the attached files in accordance with the list passed
8 by the attached file holding unit.

1 7. The e-mail transmission/reception system of Claim 5,
2 wherein
3 the mail terminal further comprises:
4 a file format registration unit operable to register one
5 or more files formats of attached files for each receiver's
6 address that the receiver should adopt in the mail gateway,
7 the mail gateway further comprises:
8 a file format storage unit operable to store receivers'

9 addresses and file formats that are registered by the file
10 format registration unit; and

11 a file format conversion unit operable to convert file
12 formats of attached files for each receiver's address in
13 accordance with the receivers' addresses and the file formats
14 that are stored in the file format storage unit,

15 wherein the construction unit constructs e-mail by
16 attaching the attached files converted by the file format
17 conversion unit from and as a substitute for the attached files
18 acquired by the attached file acquisition unit.

1 8. The e-mail transmission/reception system of Claim 5,
2 wherein

3 the mail terminal further comprises:

4 a sharing notification unit operable to notify the mail
5 gateway that one or more attached files included in e-mail
6 addressed to the user of the mail terminal are to be shared with
7 other users,

8 the mail gateway further comprises:

9 an attached file sharing unit operable to, when receiving
10 the notification that the attached files are to be shared with
11 the other users from the mail terminal, share each of the
12 attached files held by the attached file holding unit with the
13 other users;

14 a shared identifier generation unit operable to generate
15 a shared identifier for each of the attached files shared by
16 the attached file sharing unit, wherein the shared identifier
17 is available for sharers of the attached files,

18 wherein the sharing notification unit further includes:
19 a shared file notification unit to notify the mail gateway of
20 one or more identifiers selected by the user from the identifier
21 list as substitutes for the one or more attached files that are
22 permitted to be shared; and

23 a sharer notification unit to notify the mail gateway of
24 one or more sharers of each of the attached files that are to
25 be shared with the other users;

26 wherein the attached file sharing unit shares attached
27 files that correspond to the identifiers notified from the
28 shared file notification unit among attached files held by the
29 attached file holding unit with the sharers notified from the
30 sharer notification unit,

31 the list transmission unit further transmits a list of
32 the shared identifiers to the sharers of the attached files,
33 the attached file acquisition unit further acquires attached
34 files that correspond to the shared identifiers, and

35 the list reception unit further receives a list of shared
36 identifiers that have one to one correspondence to each of the
37 attached files that are shared by the user of the mail terminal
38 as one member of the sharers.

1 9. A mail gateway that is connected to a mail terminal via
2 a network and a mail server via another network, the mail server
3 receiving e-mail addressed to a user of the mail terminal and
4 holding one or more attached files included in the received
5 e-mail,

6 the mail gateway comprising:

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7 an identifier generation unit operable to generate an
8 identifier for each attached file held by the mail server;

9 a list transmission unit operable to generate a list of
10 identifiers generated by the identifier generation unit and
11 transmit the list to the mail terminal;

12 a reception unit operable to receive e-mail transmitted
13 from the mail terminal, the e-mail including one or more
14 identifiers selected by the user from the identifier list as
15 substitutes for one or more attached files that the user wants
16 to attach to the e-mail;

17 an attached file acquisition unit operable to acquire
18 attached files from the mail server, the attached files
19 corresponding to the identifiers included in the e-mail
20 received by the reception unit;

21 a construction unit operable to construct e-mail by
22 attaching the attached files acquired by the attached file
23 acquisition unit to the e-mail received by the reception unit;
24 and

25 a mail transmission unit operable to transmit the e-mail
26 constructed by the construction unit to the mail server.

1 10. The mail gateway of Claim 9, wherein
2 the mail server functions, whenever receiving e-mail that
3 includes attached files, so as to generate a list of the attached
4 files and passes the list to the mail gateway,
5 wherein the identifier generation unit generates an
6 identifier for each of the attached files in accordance with
7 the list passed by the mail server.

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12 identifiers corresponding to the one or more attached files,
13 the attached files being included in e-mail addressed to the
14 user of the mail terminal and being permitted to be shared with
15 other users, and notify the mail gateway of one or more sharers
16 who shares the one or more attached files,

17 wherein the attached file sharing unit shares the one or
18 more attached files that correspond to the one or more
19 identifiers notified from the mail terminal out of attached
20 files held by the mail server among the notified sharers,

21 the list transmission unit further transmits a list of
22 the shared identifiers to the sharers of the attached files,
23 and

24 the attached file acquisition unit further acquires
25 attached files that correspond to the shared identifiers.

1 13. A mail gateway that is connected to a mail terminal via
2 a network, the mail gateway comprising:

3 an attached file holding unit operable to receive e-mail
4 addressed to a user who possesses the mail terminal and hold
5 one or more attached files included in the e-mail; and

6 an identifier generation unit operable to generate an
7 identifier for each attached file held by the attached file
8 holding unit;

9 a list transmission unit operable to generate a list of
10 identifiers generated by the identifier generation unit and
11 transmit the list to the mail terminal;

12 a reception unit operable to receive e-mail transmitted
13 from the mail terminal, the e-mail including one or more

14 identifiers selected by the user from the identifier list as
15 substitutes for one or more attached files that the user wants
16 to attach to the e-mail;

17 an attached file acquisition unit operable to acquire
18 attached files from the attached file holding unit, the attached
19 files corresponding to the identifiers included in the e-mail
20 received by the reception unit;

21 a construction unit operable to construct e-mail by
22 attaching the attached files acquired by the attached file
23 acquisition unit to the e-mail received by the reception unit;
24 and

25 a mail distribution unit operable to distribute the
26 e-mail constructed by the construction unit to receivers'
27 addresses of the e-mail.

1 14. The mail gateway of Claim 13, wherein
2 the attached file holding unit, whenever receiving e-
3 mail that includes attached files, generates a list of the
4 attached files and passes the list to the identifier generation
5 unit, and

6 the identifier generation unit generates an identifier
7 for each of the attached files in accordance with the list passed
8 by the attached file holding unit.

1 15. The mail gateway of Claim 13, further comprising:

2 a file format storage unit operable to store receivers'
3 addresses and file formats that are registered by the mail
4 terminal; and

5 a file format conversion unit operable to convert one or
6 more file formats of attached files for each receiver's address
7 in accordance with the receivers' addresses and the file formats
8 that are stored in the file format storage unit,

9 wherein the mail terminal functions so as to register the
10 one or more file formats of attached files for each receiver's
11 address that the receiver should adopt in the mail gateway, and

12 the construction unit constructs e-mail by attaching the
13 attached files converted by the file format conversion unit from
14 and as substitutes for the attached files acquired by the
15 attached file acquisition unit.

1 16. The mail gateway of Claim 13, further comprising:

2 an attached file sharing unit operable to, when receiving
3 a notification that attached files are to be shared with other
4 users from the mail terminal, share each of the attached files
5 held by the attached file holding unit with the other users;

6 a shared identifier generation unit operable to generate
7 a shared identifier for each of the attached files shared by
8 the attached file sharing unit, wherein the shared identifier
9 is available for sharers of the attached files,

10 wherein the mail terminal functions so as to notify the
11 mail gateway that one or more attached files by means of
12 identifiers corresponding to the one or more attached files,
13 the attached files being included in e-mail addressed to the
14 user of the mail terminal and being permitted to be shared with
15 other users, and notify the mail gateway of one or more sharers
16 who shares the one or more attached files;

17 wherein the attached file sharing unit shares the one or
18 more attached files that correspond to the one or more
19 identifiers notified from the mail terminal out of attached
20 files held by the mail server among the notified sharers,
21 the list transmission unit further transmits a list of
22 the shared identifiers to the sharers of the attached files,
23 and
24 the attached file acquisition unit further acquires
25 attached files that correspond to the shared identifiers.

1 17. A mail terminal that is connected to a mail gateway via
2 a network, the mail gateway generating an identifier for each
3 of attached files included in e-mail addressed to a user of the
4 mail terminal and managing the generated identifier, the mail
5 terminal comprising:

6 a list reception unit operable to receive a list of
7 identifiers from the mail gateway;

8 a preparation unit operable to prepare e-mail that
9 includes one or more identifiers selected by the user from the
10 identifier list as substitutes for one or more attached files
11 that the user wants to attach to the e-mail; and

12 a transmission unit operable to transmit the e-mail
13 prepared by the preparation unit to the mail gateway.

1 18. The mail terminal of Claim 17, further comprising:

2 a file format registration unit operable to register one
3 or more files formats of attached files for each receiver's
4 address that the receiver should adopt in the mail gateway,

5 wherein the mail gateway stores receivers' addresses and
6 file formats that are registered by the mail terminal, and
7 converts file formats of attached files for each receiver's
8 address in accordance with stored the receivers' addresses and
9 the file formats.

1 19. The mail terminal of Claim 17, further comprising:
2 a sharing notification unit operable to notify the mail
3 gateway that one or more attached files included in e-mail
4 addressed to the user of the mail terminal are to be shared with
5 other users,

6 wherein the sharing notification unit further includes:
7 a shared file notification unit to notify the mail gateway of
8 one or more identifiers selected by the user from the identifier
9 list as substitutes for the one or more attached files that are
10 permitted to be shared; and

11 a sharer notification unit to notify the mail gateway of
12 one or more sharers of each of the attached files that are
13 permitted to be shared with the other users;

14 wherein the mail gateway functions so as to share attached
15 files corresponding to the identifiers notified from the shared
16 file notification unit among the sharers notified from the
17 sharer notification unit and generate a shared identifier for
18 each of the shared attached files, wherein the shared identifier
19 is available for the sharers.

1 20. A method for controlling an e-mail
2 transmission/reception system including a mail terminal, a mail

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31 files from the mail server by the mail gateway, the attached
32 files corresponding to the identifiers included in the e-mail
33 received in the reception step;

34 a construction step for, by the mail gateway,
35 constructing e-mail by attaching the attached files acquired
36 in the attached file acquisition step to the e-mail received
37 in the reception step;

38 a mail transmission step for transmitting the e-mail
39 constructed in the construction step from the mail gateway to
40 the mail server; and

41 a mail distribution step for receiving the e-mail
42 transmitted from the mail gateway terminal by the mail server
43 and distributing the e-mail from the mail server to receivers'
44 addresses of the e-mail.

1 21. The method for controlling the e-mail
2 transmission/reception system of Claim 20, wherein

3 the attached file holding step, whenever receiving e-
4 mail that includes attached files, generates a list of the
5 attached files and passes the list to the mail gateway, and

6 the identifier generation step generates an identifier
7 for each of the attached files in accordance with the list passed
8 in the attached file holding step.

1 22. The method for controlling the e-mail
2 transmission/reception system of Claim 20 comprising the
3 further steps of:

4 a file format registration step for, by the mail terminal,

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5 registering one or more files formats of attached files for each
6 receiver's address that the receiver should adopt in the mail
7 gateway,

8 a file format storage step for storing receivers'
9 addresses and file formats that are registered in the file
10 format registration step; and

11 a file format conversion step for converting file formats of
12 attached files for each receiver's address in accordance with
13 the receivers' addresses and the file formats that are stored
14 in the file format storage step,

15 wherein the construction step constructs e-mail by
16 attaching the attached files converted in the file format
17 conversion step from and as a substitute for the attached files
18 acquired in the attached file acquisition step.

1 23. The method for controlling the e-mail
2 transmission/reception system of Claim 20 comprising the
3 further steps of:

4 a sharing notification step for notifying the mail
5 gateway that one or more attached files included in e-mail
6 addressed to the user of the mail terminal are to be shared with
7 other users,

8 an attached file sharing step for, when the mail gateway
9 receives the notification that the attached files are to be
10 shared with the other users from the mail terminal, sharing each
11 of the attached files held by the mail server with the other
12 users;

13 a shared identifier generation step for, by the mail

14 gateway, generating a shared identifier for each of the attached
15 files shared in the attached file sharing step, wherein the
16 shared identifier is available for sharers of the attached
17 files,

18 wherein the sharing notification step further includes:
19 a shared file notification sub step for notifying one or more
20 identifiers selected by the user from the identifier list as
21 substitutes for the one or more attached files that are
22 permitted to be shared; and

23 a sharer notification sub step for notifying the mail
24 gateway of one or more sharers of each of the attached files
25 that are to be shared with the other users;

26 wherein the attached file sharing step shares attached
27 files that correspond to the identifiers notified from the
28 shared file notification sub step among attached files held by
29 the mail server with the sharers notified from the sharer
30 notification sub step,

31 the list transmission step further transmits a list of
32 the shared identifiers to the sharers of the attached files,
33 the attached file acquisition step further acquires attached
34 files that correspond to the shared identifiers, and

35 the list reception step further receives a list of shared
36 identifiers that have one to one correspondence to each of the
37 attached files that are shared by the user of the mail terminal
38 as one member of the sharers.

1 24. A method for controlling an e-mail
2 transmission/reception system including a mail terminal and a

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3 mail gateway, the mail gateway being connected to the mail
4 terminal via a network,

5 the method comprising the steps of:

6 an attached file holding step for receiving e-mail
7 addressed to a user who possesses the mail terminal and holding
8 one or more attached files included in the e-mail in the mail
9 gateway;

10 an identifier generation step for, by the mail gateway,
11 generating an identifier for each attached file held in the
12 attached file holding step;

13 a list transmission step for generating a list of
14 identifiers generated in the identifier generation step and
15 transmitting the list from the gateway to the mail terminal;

16 a list reception step for, by the mail terminal, receiving
17 the identifier list from the mail gateway;

18 a preparation step for preparing e-mail that includes one
19 or more identifiers selected by the user from the identifier
20 list as substitutes for one or more attached files that the user
21 wants to attach to the e-mail;

22 a transmission step for transmitting the e-mail prepared
23 in the preparation step from the mail terminal to the mail
24 gateway;

25 a reception step for receiving e-mail transmitted from
26 the mail terminal, the e-mail including one or more identifiers
27 selected by the user from the identifier list as substitutes
28 for one or more attached files that the user wants to attach
29 to the e-mail;

30 an attached file acquisition step for, by the mail gateway,

31 acquiring attached files from the attached file holding step,
32 the attached files corresponding to the identifiers included
33 in the e-mail received in the reception step;

34 a construction step for constructing e-mail by attaching
35 the attached files acquired in the attached file acquisition
36 step to the e-mail received in the reception step; and

37 a mail distribution step for distributing the e-mail
38 constructed in the construction step to receivers' addresses
39 of the e-mail.

1 25. The method for controlling the e-mail
2 transmission/reception system of Claim 24, wherein

3 the attached file holding step, whenever receiving e-
4 mail that includes attached files, generates a list of the
5 attached files and passes the list to the identifier generation
6 step, and

7 the identifier generation step generates an identifier
8 for each of the attached files in accordance with the list passed
9 from the attached file holding step.

1 26. The method for controlling the e-mail
2 transmission/reception system of Claim 24, comprising the
3 further steps of:

4 a file format registration step for, by the mail terminal,
5 registering one or more files formats of attached files for each
6 receiver's address that the receiver should adopt in the mail
7 gateway,

8 a file format storage step for storing receivers'

9 addresses and file formats that are registered in the file
10 format registration step; and

11 a file format conversion step for converting file formats
12 of attached files for each receiver's address in accordance with
13 the receivers' addresses and the file formats that are stored
14 in the file format storage step,

15 wherein the construction step constructs e-mail by
16 attaching the attached files converted in the file format
17 conversion step from and as a substitute for the attached files
18 acquired in the attached file acquisition step.

1 27. The method for controlling the e-mail
2 transmission/reception system of Claim 24, comprising the
3 further steps of:

4 a sharing notification step for, by the mail terminal,
5 notifying the mail gateway that one or more attached files
6 included in e-mail addressed to the user of the mail terminal
7 are to be shared with other users,

8 an attached file sharing step for, when receiving the
9 notification that the attached files are to be shared with the
10 other users from the mail terminal, sharing each of the attached
11 files held by the mail server with the other users; and

12 a shared identifier generation step for generating a
13 shared identifier for each of the attached files shared in the
14 attached file sharing step, wherein the shared identifier is
15 available for sharers of the attached files,

16 wherein the sharing notification step further includes:

17 a shared file notification sub step for notifying the mail

18 gateway of one or more identifiers selected by the user from
19 the identifier list as substitutes for the one or more attached
20 files that are permitted to be shared; and

21 a sharer notification sub step for notifying the mail
22 gateway of one or more sharers of each of the attached files
23 that are to be shared with the other users;

24 wherein the attached file sharing step shares attached
25 files that correspond to the identifiers notified from the
26 shared file notification sub step among attached files held by
27 the mail server with the sharers notified from the sharer
28 notification sub step,

29 the list transmission step further transmits a list of
30 the shared identifiers to the sharers of the attached files,
31 the attached file acquisition step further acquires attached
32 files that correspond to the shared identifiers, and

33 the list reception step further receives a list of shared
34 identifiers that have one to one correspondence to each of the
35 attached files that are shared by the user of the mail terminal
36 as one member of the sharers.

1 28. A method for controlling a mail gateway that is connected
2 to a mail terminal via a network and a mail server via another
3 network, the mail server receiving e-mail addressed to a user
4 of the mail terminal and holding one or more attached files
5 included in the received e-mail,

6 the method comprising the steps of:

7 an identifier generation step for generating an
8 identifier for each attached file held by the mail server;

9 a list transmission step for generating a list of
10 identifiers generated in the identifier generation step and
11 transmitting the list to the mail terminal;

12 a reception step for receiving e-mail transmitted from
13 the mail terminal, the e-mail including one or more identifiers
14 selected by the user from the identifier list as substitutes
15 for one or more attached files that the user wants to attach
16 to the e-mail;

17 an attached file acquisition step for acquiring attached
18 files from the mail server, the attached files corresponding
19 to the identifiers included in the e-mail received in the
20 reception step;

21 a construction step for constructing e-mail by attaching
22 the attached files acquired in the attached file acquisition
23 step to the e-mail received in the reception step; and

24 a mail transmission step for transmitting the e-mail
25 constructed in the construction step to the mail server.

1 29. The method for controlling the mail gateway of Claim 28,
2 wherein

3 the mail server functions, whenever receiving e-mail that
4 includes attached files, so as to generate a list of the attached
5 files and passes the list to the mail gateway, and

6 the identifier generation step generates an identifier
7 for each of the attached files in accordance with the list passed
8 by the mail server.

1 30. The method for controlling the mail gateway of Claim 28,

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2 comprising the further steps of:

3 a file format storage step for storing receivers'
4 addresses and file formats that are registered by the mail
5 terminal; and

6 a file format conversion step for converting one or more
7 file formats of attached files for each receiver's address in
8 accordance with the receivers' addresses and the file formats
9 that are stored in the file format storage step,

10 wherein the mail terminal functions so as to register the
11 one or more file formats of attached files for each receiver's
12 address that the receiver should adopt in the mail gateway, and

13 the construction step constructs e-mail by attaching the
14 attached files converted in the file format conversion step from
15 and as substitutes for the attached files acquired in the
16 attached file acquisition step.

1 31. The method for controlling the mail gateway of Claim 28,
2 comprising the further steps of:

3 an attached file sharing step for, when receiving a
4 notification that attached files are to be shared with other
5 users from the mail terminal, sharing each of the attached files
6 held by the mail server with the other users; and

7 a shared identifier generation step for generating a
8 shared identifier for each of the attached files shared in the
9 attached file sharing step, wherein the shared identifier is
10 available for sharers of the attached files,

11 wherein the mail terminal functions so as to notify the
12 mail gateway that one or more attached files by means of

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13 identifiers corresponding to the one or more attached files,
14 the attached files being included in e-mail addressed to the
15 user of the mail terminal and being permitted to be shared with
16 other users, and notify the mail gateway of one or more sharers
17 who shares the one or more attached files,

18 wherein the attached file sharing step shares the one or
19 more attached files that correspond to the one or more
20 identifiers notified from the mail terminal out of attached
21 files held by the mail server among the notified sharers,

22 the list transmission step further transmits a list of
23 the shared identifiers to the sharers of the attached files,
24 and

25 the attached file acquisition step further acquires
26 attached files that correspond to the shared identifiers.

1 32. A method for controlling a mail gateway that is connected
2 to a mail terminal via a network, the method comprising the steps
3 of:

4 an attached file holding step for receiving e-mail
5 addressed to a user who possesses the mail terminal and holding
6 one or more attached files included in the e-mail;

7 an identifier generation step for generating an
8 identifier for each attached file held in the attached file
9 holding step;

10 a list transmission step for generating a list of
11 identifiers generated in the identifier generation step and
12 transmitting the list to the mail terminal;

13 a reception step for receiving e-mail transmitted from

14 the mail terminal, the e-mail including one or more identifiers
15 selected by the user from the identifier list as substitutes
16 for one or more attached files that the user wants to attach
17 to the e-mail;

18 an attached file acquisition step for acquiring attached
19 files from the attached file holding step, the attached files
20 corresponding to the identifiers included in the e-mail
21 received in the reception step;

22 a construction step for constructing e-mail by attaching
23 the attached files acquired in the attached file acquisition
24 step to the e-mail received in the reception step; and

25 a mail distribution step for distributing the e-mail
26 constructed in the construction step to receivers' addresses
27 of the e-mail.

1 33. The method for controlling the mail gateway of Claim 32,
2 wherein

3 the attached file holding step, whenever receiving e-
4 mail that includes attached files, generates a list of the
5 attached files and passes the list to the identifier generation
6 step, and

7 the identifier generation step generates an identifier
8 for each of the attached files in accordance with the list passed
9 from the attached file holding step.

1 34. The method for controlling the mail gateway of Claim 32,
2 comprising the further steps of:

3 a file format storage step for storing receivers'

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4 addresses and file formats that are registered by the mail
5 terminal; and

6 a file format conversion step for converting one or more
7 file formats of attached files for each receiver's address in
8 accordance with the receivers' addresses and the file formats
9 that are stored in the file format storage step,

10 wherein the mail terminal functions so as to register the
11 one or more file formats of attached files for each receiver's
12 address that the receiver should adopt in the mail gateway, and

13 the construction step constructs e-mail by attaching the
14 attached files converted in the file format conversion step from
15 and as substitutes for the attached files acquired in the
16 attached file acquisition step.

1 35. The method for controlling the mail gateway of Claim 32,
2 comprising the further steps of:

3 an attached file sharing step for, when receiving a
4 notification that attached files are to be shared with other
5 users from the mail terminal, sharing each of the attached files
6 held in the attached file holding step with the other users;

7 a shared identifier generation step for generating a
8 shared identifier for each of the attached files shared in the
9 attached file sharing step, wherein the shared identifier is
10 available for sharers of the attached files,

11 wherein the mail terminal functions so as to notify the
12 mail gateway that one or more attached files by means of
13 identifiers corresponding to the one or more attached files,
14 the attached files being included in e-mail addressed to the

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15 user of the mail terminal and being permitted to be shared with
16 other users, and notify the mail gateway of one or more sharers
17 who shares the one or more attached files;

18 wherein the attached file sharing step shares the one or
19 more attached files that correspond to the one or more
20 identifiers notified from the mail terminal out of attached
21 files held in the attached file sharing step among the notified
22 sharers,

23 the list transmission step further transmits a list of
24 the shared identifiers to the sharers of the attached files,
25 and

26 the attached file acquisition step further acquires
27 attached files that correspond to the shared identifiers.

1 36. A method for controlling a mail terminal that is connected
2 to a mail gateway via a network, the mail gateway generating
3 an identifier for each of attached files included in e-mail
4 addressed to a user of the mail terminal and managing the
5 generated identifier, the method comprising the steps of:

6 a list reception step for receiving a list of identifiers
7 from the mail gateway;

8 a preparation step for preparing e-mail that includes one
9 or more identifiers selected by the user from the identifier
10 list as substitutes for one or more attached files that the user
11 wants to attach to the e-mail; and

12 a transmission step for transmitting the e-mail prepared
13 in the preparation step to the mail gateway.

1 37. The method for controlling the mail terminal of Claim 36,
2 comprising the further steps of:

3 a file format registration step for registering one or
4 more files formats of attached files for each receiver's address
5 that the receiver should adopt in the mail gateway,

6 wherein the mail gateway stores receivers' addresses and
7 file formats that are registered by the mail terminal, and
8 converts file formats of attached files for each receiver's
9 address in accordance with stored the receivers' addresses and
10 the file formats.

1 38. The method for controlling the mail terminal of Claim 36,
2 comprising the further steps of:

3 a sharing notification step for notifying the mail
4 gateway that one or more attached files included in e-mail
5 addressed to the user of the mail terminal are to be shared with
6 other users,

7 wherein the sharing notification step further includes:
8 a shared file notification sub step for notifying the mail
9 gateway of one or more identifiers selected by the user from
10 the identifier list as substitutes for the one or more attached
11 files that are permitted to be shared; and

12 a sharer notification sub step for notifying the mail
13 gateway of one or more sharers of each of the attached files
14 that are permitted to be shared with the other users;

15 wherein the mail gateway functions so as to share attached
16 files corresponding to the identifiers notified from the shared
17 file notification sub step among the sharers notified from the

18 sharer notification sub step and generate a shared identifier
19 for each of the shared attached files, wherein the shared
20 identifier is available for the sharers.

1 39. A recording medium which is readable for a computer
2 connected to a mail terminal via a network and a mail server
3 via another network, the mail server receiving e-mail addressed
4 to a user of the mail terminal and holding one or more attached
5 files included in the received e-mail, a computer program
6 embodied on the recording medium has the computer conduct the
7 steps of:

8 an identifier generation step for generating an
9 identifier for each attached file held by the mail server;

10 a list transmission step for generating a list of
11 identifiers generated in the identifier generation step and
12 transmitting the list to the mail terminal;

13 a reception step for receiving e-mail transmitted from
14 the mail terminal, the e-mail including one or more identifiers
15 selected by the user from the identifier list as substitutes
16 for one or more attached files that the user wants to attach
17 to the e-mail;

18 an attached file acquisition step for acquiring attached
19 files from the mail server, the attached files corresponding
20 to the identifiers included in the e-mail received in the
21 reception step;

22 a construction step for constructing e-mail by attaching
23 the attached files acquired in the attached file acquisition
24 step to the e-mail received in the reception step; and

25 a mail transmission step for transmitting the e-mail
26 constructed in the construction step to the mail server.

1 40. The recording medium of Claim 39, wherein
2 the mail server functions, whenever receiving e-mail that
3 includes attached files, so as to generate a list of the attached
4 files and passes the list to the mail gateway, and
5 the identifier generation step generates an identifier
6 for each of the attached files in accordance with the list passed
7 by the mail server.

1 41. The recording medium of Claim 39, wherein the computer
2 program embodied on the recording medium has the computer
3 conduct the further steps of:

4 a file format storage step for storing receivers'
5 addresses and file formats that are registered by the mail
6 terminal; and

7 a file format conversion step for converting one or more
8 file formats of attached files for each receiver's address in
9 accordance with the receivers' addresses and the file formats
10 that are stored in the file format storage step,

11 wherein the mail terminal functions so as to register the
12 one or more file formats of attached files for each receiver's
13 address that the receiver should adopt in the mail gateway, and

14 the construction step constructs e-mail by attaching the
15 attached files converted in the file format conversion step from
16 and as substitutes for the attached files acquired in the
17 attached file acquisition step.

1 42. The recording medium of Claim 39, wherein the computer
2 program embodied on the recording medium has the computer
3 conduct the further steps of:

4 an attached file sharing step for, when receiving a
5 notification that attached files are to be shared with other
6 users from the mail terminal, sharing each of the attached files
7 held by the mail server with the other users; and

8 a shared identifier generation step for generating a
9 shared identifier for each of the attached files shared in the
10 attached file sharing step, wherein the shared identifier is
11 available for sharers of the attached files,

12 wherein the mail terminal functions so as to notify the
13 mail gateway that one or more attached files by means of
14 identifiers corresponding to the one or more attached files,
15 the attached files being included in e-mail addressed to the
16 user of the mail terminal and being permitted to be shared with
17 other users, and notify the mail gateway of one or more sharers
18 who shares the one or more attached files,

19 wherein the attached file sharing step shares the one or
20 more attached files that correspond to the one or more
21 identifiers notified from the mail terminal out of attached
22 files held by the mail server among the notified sharers,

23 the list transmission step further transmits a list of
24 the shared identifiers to the sharers of the attached files,
25 and

26 the attached file acquisition step further acquires
27 attached files that correspond to the shared identifiers.

28 of the e-mail.

1 44. The recording medium of Claim 43, wherein
2 the attached file holding step, whenever receiving e-
3 mail that includes attached files, generates a list of the
4 attached files and passes the list to the identifier generation
5 step, and
6 the identifier generation step generates an identifier
7 for each of the attached files in accordance with the list passed
8 from the attached file holding step.

1 45. The recording medium of Claim 43, wherein the computer
2 program embodied on the recording medium has the computer
3 conduct the further steps of:

4 a file format storage step for storing receivers'
5 addresses and file formats that are registered by the mail
6 terminal; and

7 a file format conversion step for converting one or more
8 file formats of attached files for each receiver's address in
9 accordance with the receivers' addresses and the file formats
10 that are stored in the file format storage step,

11 wherein the mail terminal functions so as to register the
12 one or more file formats of attached files for each receiver's
13 address that the receiver should adopt in the mail gateway, and

14 the construction step constructs e-mail by attaching the
15 attached files converted in the file format conversion step from
16 and as substitutes for the attached files acquired in the
17 attached file acquisition step.

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1 46. The recording medium of Claim 43, wherein the computer
2 program embodied on the recording medium has the computer
3 conduct the further steps of:

4 an attached file sharing step for, when receiving a
5 notification that attached files are to be shared with other
6 users from the mail terminal, sharing each of the attached files
7 held in the attached file holding step with the other users;
8 and

9 a shared identifier generation step for generating a
10 shared identifier for each of the attached files shared in the
11 attached file sharing step, wherein the shared identifier is
12 available for sharers of the attached files,

13 wherein the mail terminal functions so as to notify the
14 mail gateway that one or more attached files by means of
15 identifiers corresponding to the one or more attached files,
16 the attached files being included in e-mail addressed to the
17 user of the mail terminal and being permitted to be shared with
18 other users, and notify the mail gateway of one or more sharers
19 who shares the one or more attached files;

20 wherein the attached file sharing step shares the one or
21 more attached files that correspond to the one or more
22 identifiers notified from the mail terminal out of attached
23 files held in the attached file sharing step among the notified
24 sharers,

25 the list transmission step further transmits a list of
26 the shared identifiers to the sharers of the attached files,
27 and

28 the attached file acquisition step further acquires
29 attached files that correspond to the shared identifiers.

1 47. A recording medium which is readable for a computer that
2 is connected to a mail gateway via a network, the mail gateway
3 generating an identifier for each of attached files included
4 in e-mail addressed to a user of a mail terminal and managing
5 the generated identifier, a computer program embodied on the
6 recording medium has the computer conduct the steps of:

7 a list reception step for receiving a list of identifiers
8 from the mail gateway;

9 a preparation step for preparing e-mail that includes one
10 or more identifiers selected by the user from the identifier
11 list as substitutes for one or more attached files that the user
12 wants to attach to the e-mail; and

13 a transmission step for transmitting the e-mail prepared
14 in the preparation step to the mail gateway.

1 48. The recording medium of Claim 47, wherein the computer
2 program embodied on the recording medium has the computer
3 conduct the further steps of:

4 a file format registration step for registering one or
5 more files formats of attached files for each receiver's address
6 that the receiver should adopt in the mail gateway,

7 wherein the mail gateway stores receivers' addresses and
8 file formats that are registered by the mail terminal, and
9 converts file formats of attached files for each receiver's
10 address in accordance with stored the receivers' addresses and

11 the file formats.

1 49. The recording medium of Claim 47, wherein the computer
2 program embodied on the recording medium has the computer
3 conduct the further steps of:

4 a sharing notification step for notifying the mail
5 gateway that one or more attached files included in e-mail
6 addressed to the user of the mail terminal are to be shared with
7 other users,

8 wherein the sharing notification step further includes:

9 a shared file notification sub step for notifying the mail
10 gateway of one or more identifiers selected by the user from
11 the identifier list as substitutes for the one or more attached
12 files that are permitted to be shared; and

13 a sharer notification sub step for notifying the mail
14 gateway of one or more sharers of each of the attached files
15 that are permitted to be shared with the other users;

16 wherein the mail gateway functions so as to share attached
17 files corresponding to the identifiers notified from the shared
18 file notification sub step among the sharers notified from the
19 sharer notification sub step and generate a shared identifier
20 for each of the shared attached files, wherein the shared
21 identifier is available for the sharers.

1 50. A program embodied on a computer connected to a mail
2 terminal via a network and a mail server via another network,
3 the mail server receiving e-mail addressed to a user of the mail
4 terminal and holding one or more attached files included in the

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5 received e-mail, the program has the computer conduct the steps
6 of:

7 an identifier generation step for generating an
8 identifier for each attached file held by the mail server;

9 a list transmission step for generating a list of
10 identifiers generated in the identifier generation step and
11 transmitting the list to the mail terminal;

12 a reception step for receiving e-mail transmitted from
13 the mail terminal, the e-mail including one or more identifiers
14 selected by the user from the identifier list as substitutes
15 for one or more attached files that the user wants to attach
16 to the e-mail;

17 an attached file acquisition step for acquiring attached
18 files from the mail server, the attached files corresponding
19 to the identifiers included in the e-mail received in the
20 reception step;

21 a construction step for constructing e-mail by attaching
22 the attached files acquired in the attached file acquisition
23 step to the e-mail received in the reception step; and

24 a mail transmission step for transmitting the e-mail
25 constructed in the construction step to the mail server.

1 51. The program of Claim 50, wherein
2 the mail server functions, whenever receiving e-mail that
3 includes attached files, so as to generate a list of the attached
4 files and passes the list to the mail gateway, and
5 the identifier generation step generates an identifier
6 for each of the attached files in accordance with the list passed

7 by the mail server.

1 52. The program of Claim 50, wherein the program has the
2 computer the further steps of:

3 a file format storage step for storing receivers'
4 addresses and file formats that are registered by the mail
5 terminal; and

6 a file format conversion step for converting one or more
7 file formats of attached files for each receiver's address in
8 accordance with the receivers' addresses and the file formats
9 that are stored in the file format storage step,

10 wherein the mail terminal functions so as to register the
11 one or more file formats of attached files for each receiver's
12 address that the receiver should adopt in the mail gateway, and

13 the construction step constructs e-mail by attaching the
14 attached files converted in the file format conversion step from
15 and as substitutes for the attached files acquired in the
16 attached file acquisition step.

1 53. The program of Claim 50, wherein the program has the
2 computer the further steps of:

3 an attached file sharing step for, when receiving a
4 notification that attached files are to be shared with other
5 users from the mail terminal, sharing each of the attached files
6 held by the mail server with the other users; and

7 a shared identifier generation step for generating a
8 shared identifier for each of the attached files shared in the
9 attached file sharing step, wherein the shared identifier is

10 available for sharers of the attached files,

11 wherein the mail terminal functions so as to notify the
12 mail gateway that one or more attached files by means of
13 identifiers corresponding to the one or more attached files,
14 the attached files being included in e-mail addressed to the
15 user of the mail terminal and being permitted to be shared with
16 other users, and notify the mail gateway of one or more sharers
17 who shares the one or more attached files,

18 wherein the attached file sharing step shares the one or
19 more attached files that correspond to the one or more
20 identifiers notified from the mail terminal out of attached
21 files held by the mail server among the notified sharers,

22 the list transmission step further transmits a list of
23 the shared identifiers to the sharers of the attached files,
24 and

25 the attached file acquisition step further acquires
26 attached files that correspond to the shared identifiers.

1 54. A program embodied on a computer that is connected to a
2 mail terminal via a network, the program has the computer
3 conduct the steps of:

4 an attached file holding step for receiving e-mail
5 addressed to a user who possesses the mail terminal and holding
6 one or more attached files included in the e-mail;

7 an identifier generation step for generating an
8 identifier for each attached file held in the attached file
9 holding step;

10 a list transmission step for generating a list of

11 identifiers generated in the identifier generation step and
12 transmitting the list to the mail terminal;

13 a reception step for receiving e-mail transmitted from
14 the mail terminal, the e-mail including one or more identifiers
15 selected by the user from the identifier list as substitutes
16 for one or more attached files that the user wants to attach
17 to the e-mail;

18 an attached file acquisition step for acquiring attached
19 files from the attached file holding step, the attached files
20 corresponding to the identifiers included in the e-mail
21 received in the reception step;

22 a construction step for constructing e-mail by attaching
23 the attached files acquired in the attached file acquisition
24 step to the e-mail received in the reception step; and

25 a mail distribution step for distributing the e-mail
26 constructed in the construction step to receivers' addresses
27 of the e-mail.

1 55. The program of Claim 54, wherein
2 the attached file holding step, whenever receiving e-
3 mail that includes attached files, generates a list of the
4 attached files and passes the list to the identifier generation
5 step, and

6 the identifier generation step generates an identifier
7 for each of the attached files in accordance with the list passed
8 from the attached file holding step.

1 56. The program of Claim 54, wherein the program has the

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2 computer conduct the further steps of:

3 a file format storage step for storing receivers'
4 addresses and file formats that are registered by the mail
5 terminal; and

6 a file format conversion step for converting one or more
7 file formats of attached files for each receiver's address in
8 accordance with the receivers' addresses and the file formats
9 that are stored in the file format storage step,

10 wherein the mail terminal functions so as to register the
11 one or more file formats of attached files for each receiver's
12 address that the receiver should adopt in the mail gateway, and

13 the construction step constructs e-mail by attaching the
14 attached files converted in the file format conversion step from
15 and as substitutes for the attached files acquired in the
16 attached file acquisition step.

1 57. The program of Claim 54, wherein the program has the
2 computer conduct the further steps of:

3 an attached file sharing step for, when receiving a
4 notification that attached files are to be shared with other
5 users from the mail terminal, sharing each of the attached files
6 held in the attached file holding step with the other users;

7 a shared identifier generation step for generating a
8 shared identifier for each of the attached files shared in the
9 attached file sharing step, wherein the shared identifier is
10 available for sharers of the attached files,

11 wherein the mail terminal functions so as to notify the
12 mail gateway that one or more attached files by means of

13 identifiers corresponding to the one or more attached files,
14 the attached files being included in e-mail addressed to the
15 user of the mail terminal and being permitted to be shared with
16 other users, and notify the mail gateway of one or more sharers
17 who shares the one or more attached files;

18 wherein the attached file sharing step shares the one or
19 more attached files that correspond to the one or more
20 identifiers notified from the mail terminal out of attached
21 files held in the attached file sharing step among the notified
22 sharers,

23 the list transmission step further transmits a list of
24 the shared identifiers to the sharers of the attached files,
25 and

26 the attached file acquisition step further acquires
27 attached files that correspond to the shared identifiers.

1 58. A program embodied on a computer that is connected to a
2 mail gateway via a network, the mail gateway generating an
3 identifier for each of attached files included in e-mail
4 addressed to a user of a mail terminal and managing the generated
5 identifier, the program has the computer conduct the steps of:

```
6         a list reception step for receiving a list of identifiers
7     from the mail gateway;
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8 a preparation step for preparing e-mail that includes one
9 or more identifiers selected by the user from the identifier
10 list as substitutes for one or more attached files that the user
11 wants to attach to the e-mail; and

12 a transmission step for transmitting the e-mail prepared

13 in the preparation step to the mail gateway.

1 59. The program of Claim 58, wherein the program has the
2 computer conduct the further steps of:

3 a file format registration step for registering one or
4 more files formats of attached files for each receiver's address
5 that the receiver should adopt in the mail gateway,

6 wherein the mail gateway stores receivers' addresses and
7 file formats that are registered by the mail terminal, and
8 converts file formats of attached files for each receiver's
9 address in accordance with stored the receivers' addresses and
10 the file formats.

1 60. The program of Claim 58, wherein the program has the
2 computer conduct the further steps of:

3 a sharing notification step for notifying the mail
4 gateway that one or more attached files included in e-mail
5 addressed to the user of the mail terminal are to be shared with
6 other users,

7 wherein the sharing notification step further includes:
8 a shared file notification sub step for notifying the mail
9 gateway of one or more identifiers selected by the user from
10 the identifier list as substitutes for the one or more attached
11 files that are permitted to be shared; and

12 a sharer notification sub step for notifying the mail
13 gateway of one or more sharers of each of the attached files
14 that are permitted to be shared with the other users;

15 wherein the mail gateway functions so as to share attached

16 files corresponding to the identifiers notified from the shared
17 file notification sub step among the sharers notified from the
18 sharer notification sub step and generate a shared identifier
19 for each of the shared attached files, wherein the shared
20 identifier is available for the sharers.

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